

# Withlacoochee River Working Group

## San Felasco Invasive Exotic Plant Control

PCL: San Felasco Hammock Preserve State Park  
 Project Manager: Florida Park Service (DEP)  
 Randy Brown, Park Manager  
 4732 Millhopper Road, Gainesville, Florida 32653  
 Phone: 386-462-7905, Fax: 386-462-7297  
 E-mail: [randall.e.brown@dep.state.fl.us](mailto:randall.e.brown@dep.state.fl.us)

County: Alachua  
 PCL Size: 6,926 acres

Project ID: WR-026

Project Size: 500 acres

Fiscal Year 01/02

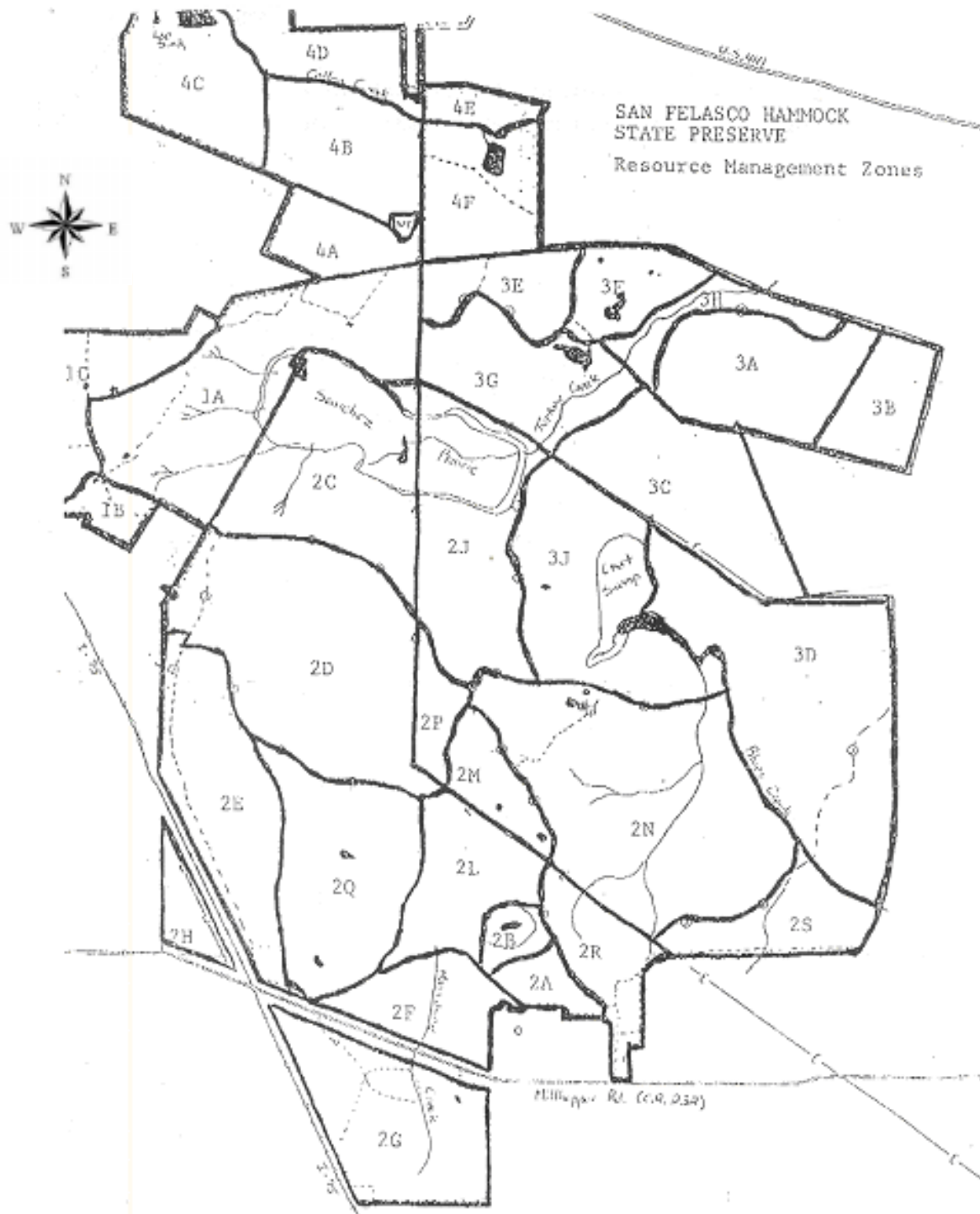
Project Cost: \$16,975.48

San Felasco Hammock Preserve State Park is located northwest of Gainesville along Millhopper Road (CR 232). This project encompassed two major areas; portions of the Moonshine Creek and Blues Creek watersheds, and the northern quadrant of the Preserve north of Sanchez Prairie. Since the original park acquisition in 1974, there have been several additions to the Preserve. This proposal lies within an 809-acre parcel purchased in 1994. This parcel was the headquarters for a dairy operation during the 1950s and later the site of an extensive tung oil orchard. Many of the tung oil trees have persisted, especially those along the slopes of the many relatively undisturbed sinkholes and ravines in the area. This species continues to be the most widespread of the exotics described for this project, covering approximately 450 acres in total. It has steadily invaded the northern slopes of Sanchez Prairie over the years, and the potential for continued spread into and through the prairie lowlands is very high. The stand density varies from low at outlying spots to very high in locations close to the old orchard operation.

Target Plants	Common Name	FLEPPC Rank	Treatment	Herbicide
<i>Melia azedarach</i>	Chinaberry	Category I	basal bark	Garlon 4
<i>Cinnamomum camphora</i>	camphor tree	Category I	basal bark	Garlon 4
<i>Albizia julibrissin</i>	mimosa	Category I	basal bark	Garlon 4
<i>Aleurites fordii</i>	tung oil tree	Category II	basal/hand pull	Garlon 4
<i>Wisteria sinensis</i>	Chinese wisteria	Category II	basal bark	Garlon 4
<i>Ricinus communis</i>	castor bean	Category II	basal bark	Garlon 4
<i>Citrus</i> spp.	citrus	n/a	basal bark	Garlon 4
<i>Lagerstroemia indica</i>	crape-myrtle	n/a	basal bark	Garlon 4



A basal bark herbicide treatment is quick and effective in dense stands of exotic trees.



Many management areas are divided into “zones,” which can help in treating and tracking exotics.

**Paynes Prairie Invasive Exotic Plant Control**

PCL: Paynes Prairie Preserve State Park  
 Project Manager: Florida Park Service (DEP)  
 James Weimer, Preserve Biologist  
 Route 2, Box 41, Micanopy, Florida 32667  
 Phone: 352-466-8081, Fax: 352-466-4297  
 E-mail: [jim.weimer@dep.state.fl.us](mailto:jim.weimer@dep.state.fl.us)

County: Alachua  
 PCL Size: 20,945 acres

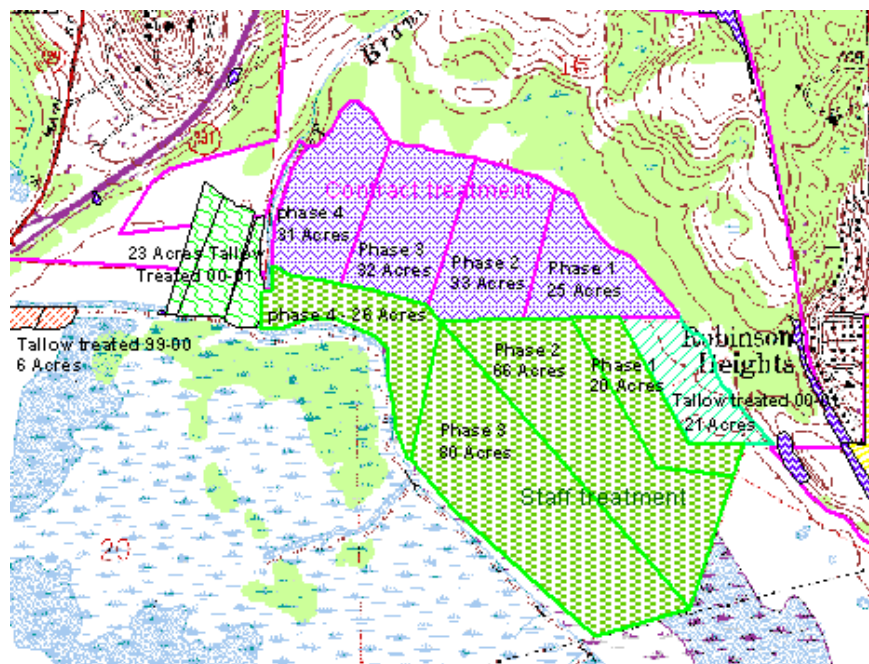
Project ID: WR-021  
 Fiscal Year 01/02

Project Size: 45 acres  
 Project Cost: \$10,104.26

Paynes Prairie Preserve State Park is located immediately south of Gainesville. The park is listed as an Outstanding Florida Water, a National Natural Landmark, and a Priority Wetland Species Use Area. The park has a national reputation for the abundance and diversity of its plants and animals. With its large size, the park is the central piece in the Orange Creek Corridor of public lands, which stretches over forty miles, extending from the Santa Fe River in the north to the Ocklawaha River to the southeast.

This project targeted Chinese tallow. The total project size is 312 acres; however, the project was divided into four phases with one phase proposed for each of the next four years. Each year the project site will be divided into two parcels. One parcel will be treated by a contractor and the other will be treated by park staff as an in-kind contribution. The total project is divided into 120 acres to be contracted and 192 acres to be treated by staff. Phase I, treated this year, included 25 acres under contract and 20 acres treated by staff. Most of the project area was covered with a practically impenetrable thicket of small trees, shrubs, briars, and vines that virtually precluded normal access. To facilitate contractor access and to initiate restoration of the site, staff used heavy equipment (chopper and tree cutter) to cut paths through the project site. These paths were laid out in grid and maps of the grid provided to the contractor. Paths will be suitable for foot traffic but will be too rough for use by vehicles. After treatment of exotics, the site will receive additional chopping and a prescribed burn to facilitate community restoration. As the site is opened up by exotics control, wetter spots along drainage channels are expected to be invaded by wild taro (*Colocasia esculenta*). Wild taro is a Category I invasive exotic and will be treated by staff as needed. Prior experience with wet prairie restoration indicates that the soil seed bank will prove adequate to restore native vegetation and a revegetation program will not be necessary.

Target Plants	Common Name	FLEPPC Rank	Treatment	Herbicide
<i>Sapium sebiferum</i>	Chinese tallow	Category I	basal	Garlon 4
			foliar	Garlon 4
<i>Cinnamomum camphora</i>	camphor-tree	Category I	basal	Garlon 4



**Loblolly Woods Phase II Invasive Exotic Plant Control**

County: Alachua  
 PCL Size: 130 acres

PCL: Loblolly Woods

Project Manager: City of Gainesville Recreation and Parks  
 Denise Sauerbrey  
 1024 NE 14th Street, Building A, Gainesville, Florida 32602  
 Phone: 352-334-2231, Fax: 352-334-2234  
 E-mail: [sauerbreyd@gru.net](mailto:sauerbreyd@gru.net)

Project ID: WR-023

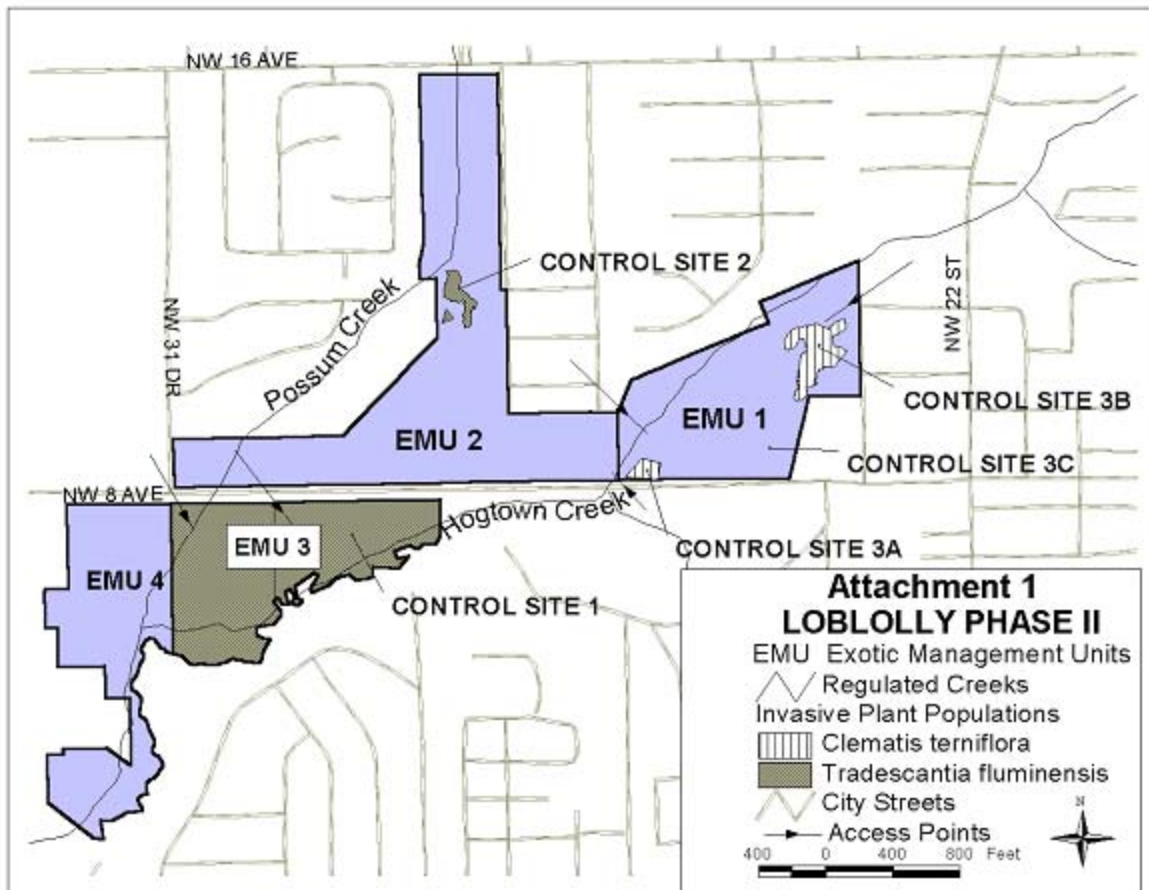
Project Size: 55.75 acres

Fiscal Year 01/02

Project Cost: \$24,419.91

The primary goal of this project was to control emerging populations of small-leaf spiderwort and sweet autumn virginsbower. The secondary goal of this project was to prevent the spread of these species to new sites within the Hogtown Creek watershed. Loblolly Woods is contiguous with over 600 acres of additional greenway properties. These and other city properties have direct connections to Alachua County's conservation property at Kanapaha Prairie. Phase I of this project addressed the treatment of eleven exotic species occurring at varying densities within Loblolly Woods. The City of Gainesville manages Loblolly Woods to protect and restore natural communities, maintain the floodplains, provide passive recreation outdoors, and to serve as a connection to other conservation properties that comprise the Hogtown Creek Greenway. Loblolly Woods contains Seepage Stream, Floodplain Forest, Upland Mixed Forest, and Bottomland Forest natural communities.

Target Plants	Common Name	FLEPPC Rank	Treatment	Herbicide
<i>Tradescantia fluminensis</i>	small-leaf spiderwort	Category I	foliar	Roundup+Scythe
<i>Dioscorea bulbifera</i>	air-potato	Category I	foliar	Garlon 4/Roundup+Scythe
<i>Clematis terniflora</i>	sweet autumn virginsbower	n/a	foliar	Garlon 4



**Hernando County Brazilian Pepper Invasive Exotic Plant Control**

County: Hernando

PCL: (see below)

PCL Size: various

Project Manager: Hernando County Mosquito/Aquatic Weed Control

Dr. Guangye Hu, Manager

201 West Martin Luther King Jr. Blvd., Brooksville, Florida 34601

Phone: (352) 754-4061, Fax: (352) 754-4066

Project ID: WR-022

Project Size: 60 acres

Fiscal Year 01/02

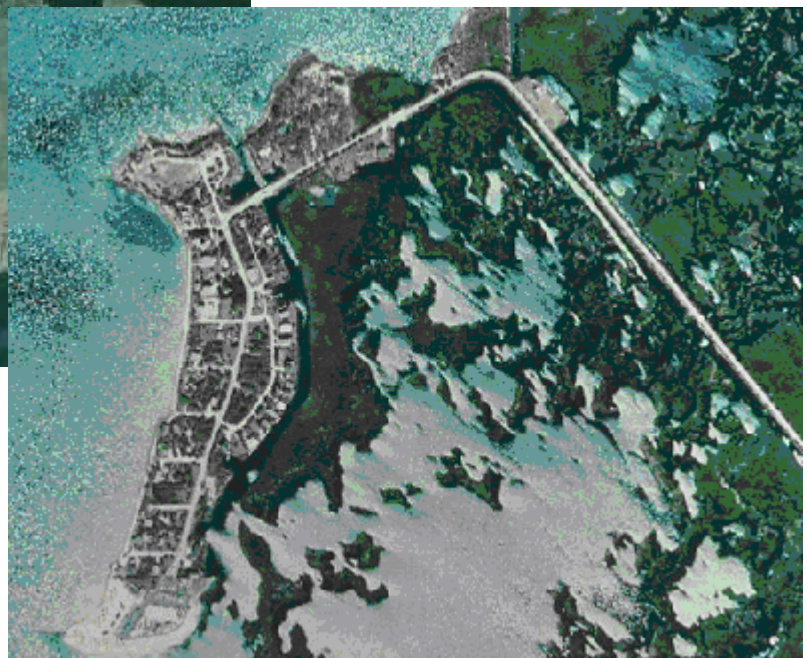
Project Cost: \$31,977.19

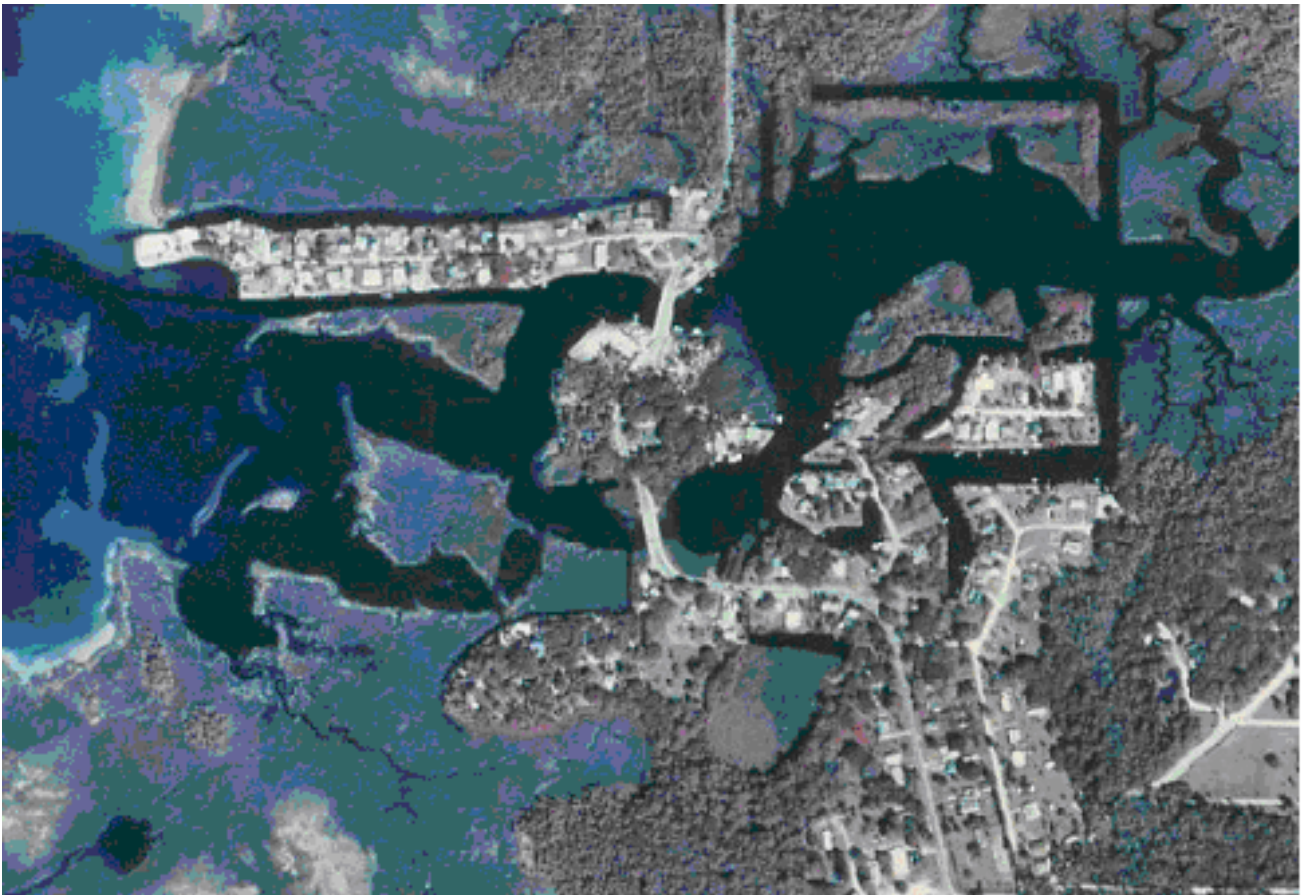
Ninety-five percent of all lands west of Highway 19 in Hernando County are held for conservation purposes. This control effort focused on public lands flanking county roads and adjacent waterways, and coastal spoil banks west of Highway 19. Preliminary assessments indicate that Brazilian pepper has not spread east of Highway 19. County lands are contiguous with state and federal conservation lands around Hernando Beach, Weeki-Wachee Preserve, Chassahowitzka National Wildlife Refuge, Aripeka, and Bayport. Brazilian pepper was targeted in the following areas: Pine Island (McKethan) Park, Bayport Park, Hernando Beach Park, Jenkins Creek Park, Hernando Beach boat ramp, and spoil islands. The treatment areas included spoil islands and a 100-foot swath along each side of trails, driveways, rivers, creeks, and parking lots. Hernando County has adopted an ordinance to ensure long-term control of Brazilian pepper. The control of this species relies on the ordinance and enforcement, plus the ability of the county to attract new partners to assist with the costs of the phases of this proposal.

Target Plants	Common Name	FLEPPC Rank	Treatment	Herbicide
<i>Schinus terebinthifolius</i>	Brazilian pepper	Category I	basal/hand pull	Garlon 4
<i>Casuarina equisetifolia</i>	Australian pine	Category I	basal bark	Garlon 4
<i>Albizia julibrissin</i>	mimosa	Category I	basal bark	Garlon 4
<i>Paederia foetida</i>	skunk vine	Category I	foliar	Roundup
<i>Koelreuteria elegans</i>	flamegold tree	Category II	basal bark	Garlon 4



The Bayport (left) and Pine Island (below) sites. Airboats were required to reach the canal banks and many small islands in this project





The Aripeka project area. Both public and private lands are affected by a Hernando County ordinance that requires the removal of Brazilian pepper from all properties within the county.



Contractor crews landed on the islands and defeated the invading Brazilian pepper (left) and Australian pine (right).



Skunk vine is a serious problem in southwest Florida. It smothers understory vegetation and has a putrid odor. This exotic invader is a real stinker!



The sun has set for the last time on these Australian pines.

**Goethe State Forest Invasive Exotic Plant Control**

County: Alachua, Levy

PCL: Goethe State Forest

PCL Size: 45,212 acres

Project Manager: Division of Forestry (DACS)  
 Elizabeth Zimmerman  
 8250 SE CR 336, Dunnellon, Florida 34431  
 Phone: 352-447-2202, Fax: 352-447-1358  
 E-mail: [zimmerere@doacs.state.fl.us](mailto:zimmerere@doacs.state.fl.us)

Project ID: WR-027

Project Size: 49.7 acres

Fiscal Year 01/02

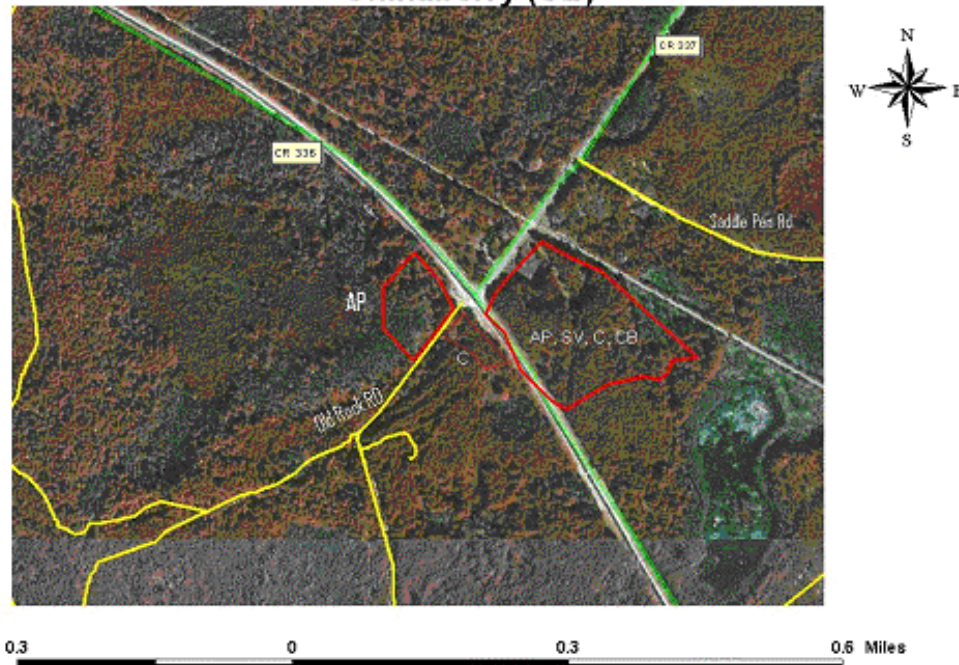
Project Cost: \$6,459.60

Goethe State Forest has more than fifteen different natural communities, including Sandhill, Mesic Flatwoods, Hydric Hammock, Scrubby Flatwoods, Wet Flatwoods, Dome Swamp, and Basin Swamp. The forest may contain the largest tract of contiguous, old-growth, longleaf pine flatwoods in the state. This extensive old-growth flatwoods has one of the largest red-cockaded woodpecker populations in Florida. Other rare animal species found on the forest include the Florida black bear, gopher tortoise, Sherman's fox squirrel, and bald eagle. Rare plants include the hooded pitcher plant, greenfly orchid, and coontie.

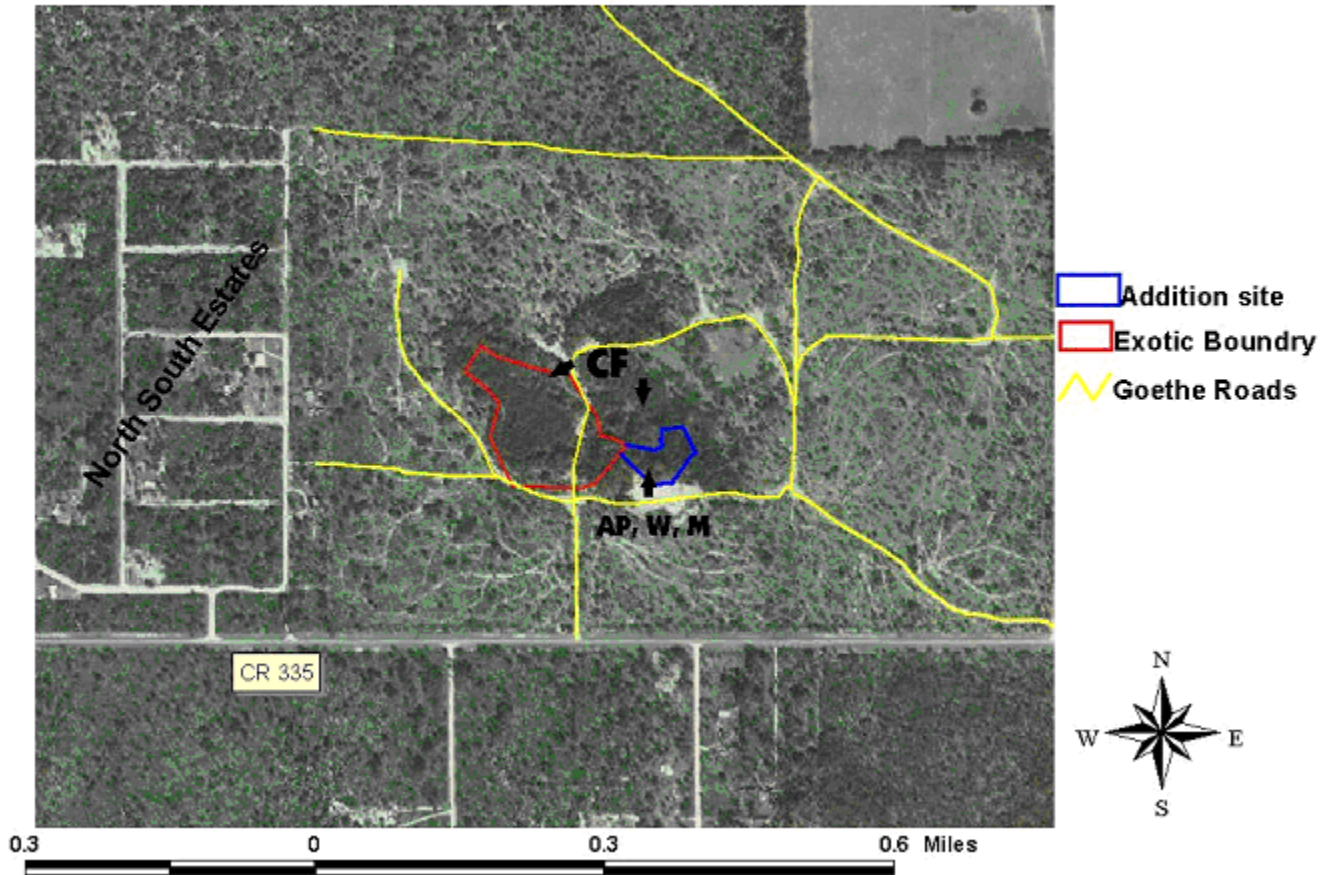
This project is divided into three exotic control areas: New Acquisition North (NAN), New Acquisition South (NAS), and Watermelon Pond East (WPE). Camphor tree, Chinaberry, and skunk vine were found within 31 acres total of NAN with 18%, 18%, and 8% cover, respectively. Camphor tree and air-potato occupied 10 acres of NAS with 20% and 30% cover, respectively. Japanese climbing fern occurred in WPE over 8.7 acres with a 45% cover.

Target Plants	Common Name	FLEPPC Rank	Treatment	Herbicide
<i>Cinnamomum camphora</i>	camphor tree	Category I	basal bark	Garlon 4
<i>Ligustrum</i> spp.	privet	Category I	basal bark	Garlon 4
<i>Albizia julibrissin</i>	mimosa	Category I	basal bark	Garlon 4
			foliar	Roundup
<i>Dioscorea bulbifera</i>	air-potato	Category I	foliar	Roundup
<i>Lygodium japonicum</i>	Japanese climbing fern	Category I	foliar	Roundup
<i>Wisteria sinensis</i>	Chinese wisteria	Category II	foliar	Roundup

**Project site -- Air Potato (AP), Skunkvine, (SV), Camphor (C), Chinaberry (CB)**



**WPE: Japanese Climbing Fern (CF), Air Potato (AP), Wisteria (W), Mimosa (M).**



Project maps for New Acquisition (previous page) and Watermelon Pond (above) areas of Goethe Forest.



Posting an informative sign at control sites helps educate the public about invasive species. The Bureau has a limited number of signs (left) that it makes available to project managers. These aluminum signs are durable and can be passed on to another project after completion.



Invasive adventive (exotic) vines are a problem throughout the state. In the north, air-potato (above) and Japanese climbing fern (right) are two of the worst invaders.



These two sites were treated for *Lygodium japonicum* and some initial die-off is evident. *L. japonicum* and its southern relative *L. microphyllum*, Old World climbing fern, are recognized as severe threats to Florida's natural areas.



**Scott Springs Invasive Exotic Plant Control**

PCL: Scott Springs/Celebrate 2000 Community Park  
 Project Manager: City of Ocala Recreation and Parks  
 Elizabeth C. Houck, Landscape Architect  
 P.O. Box 38, Ocala, Florida 34478  
 Phone: 352-629-8521, Fax: 352-629-8208  
 E-mail: [LCole@ocalafl.org](mailto:LCole@ocalafl.org)

County: Marion  
 PCL Size: 22 acres

Project ID: WR-024

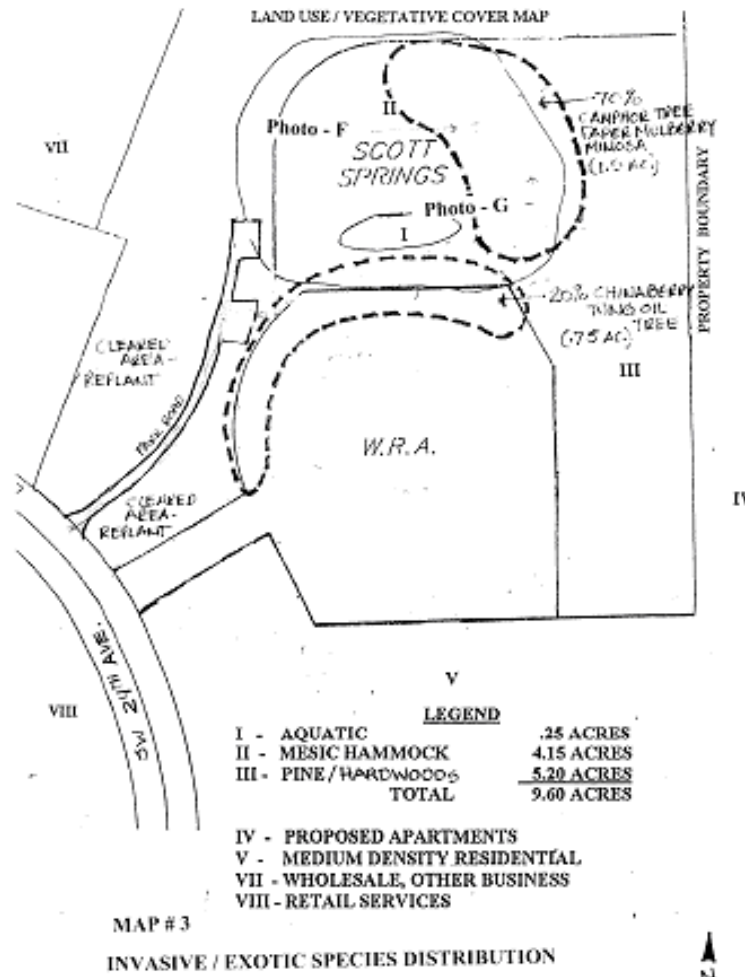
Project Size: 7 acres

Fiscal Year 01/02

Project Cost: \$6,722.48

Scott Spring/Celebrate 2000 Community Park is a 9.6-acre natural “sink” that lies amidst a 22-acre parcel of land. The site has several unique geological features including above-ground and underwater caves. Most of the invasive exotics were found in the 4.15-acre mesic hammock surrounding the sink. This area has been disturbed over the years due to artifact hunters digging throughout. Exotic plant coverage was estimated at 70%, northeast of the sink. The remainder of the preserved property is a pine upland area, (approximately 5.20 acres). This area is well drained, with rock outcrops and sinkholes occurring. The D.R.A. (Drainage Retention Area) is a dry pond supporting many vegetative pioneer species including salt bush, red cedar, pine, and hackberry. Exotic plant coverage was estimated at 20% around the drainage area boundaries.

Target Plants	Common Name	FLEPPC Rank	Treatment	Herbicide
<i>Melia azedarach</i>	Chinaberry	Category I	basal bark	Garlon 4
<i>Cinnamomum camphora</i>	camphor tree	Category I	basal bark	Garlon 4
<i>Albizia julibrissin</i>	mimosa	Category I	basal bark	Garlon 4
<i>Ligustrum spp.</i>	privet	Category I	basal bark	Garlon 4
<i>Broussonetia papyrifera</i>	paper mulberry	Category II	basal bark	Garlon 4





Boardwalks and trails lead through a “jungle” of paper mulberry.



The springs area (above) is central to the park. Here native plants (right) grow from out of the steep limestone walls.

**Fort King Invasive Exotic Plant Control**

County: Marion

PCL: Fort King Property

PCL Size: 37 acres

Project Manager: City of Ocala Recreation and Parks

Elizabeth C. Houck, Landscape Architect

P.O. Box 38, Ocala, Florida 34478

Phone: 352-629-8521, Fax: 352-629-8208

E-mail: [LCole@ocalafl.org](mailto:LCole@ocalafl.org)

Project ID: WR-028

Project Size: 37 acres

Fiscal Year 01/02

Project Cost: \$21,572.49

The Fort King property in east Ocala is comprised predominately of Upland Mesic Hardwood Hammock and much of the exotics were found in this natural community. An Aquatic Marsh at the southeast corner of the property includes a spring-fed pond, approximately 50 feet in diameter, which outfalls to a small creek traveling north. The creek floodplain was dominated by coral ardisia. An area of planted pine west of the homestead contains approximately 10% of invasive species. These are mostly concentrated adjacent to a neighboring residential property. A small area (approximately 3.5 acres) of the property was cleared due to the Southern pine beetle infestation that hit Marion County in 1997 and subsequently has become host to several invasive species. The area around the house and entry off East Fort King Street is sod under planted pines and contained approximately 5% of the invasive species.

Target Plants	Common Name	FLEPPC Rank	Treatment	Herbicide
<i>Ardisia crenata</i>	coral ardisia	Category I	basal/foliar	Garlon 4
<i>Cinnamomum camphora</i>	camphor tree	Category I	basal bark	Garlon 4
<i>Nephrolepis cordifolia</i>	sword fern	Category I	basal bark	Garlon 4
<i>Ligustrum spp.</i>	privet	Category I	basal bark	Garlon 4
<i>Albizia julibrissin</i>	mimosa	Category I	basal bark	Garlon 4
			foliar	Roundup/Garlon 4
<i>Broussonetia papyrifera</i>	paper mulberry	Category II	basal bark	Garlon 4
			foliar	Roundup
<i>Wisteria sinensis</i>	Chinese wisteria	Category II	basal bark	Garlon 4
			foliar	Roundup
<i>Koelreuteria elegans</i>	golden raintree	Category II	basal bark	Garlon 4



Coral ardisia (left) was the primary target species, while air-potato (above) remains to be treated.

**Silver River Cogon Grass Invasive Exotic Plant Control**

County: Marion

PCL: Silver River State Park

PCL Size: 4,230 acres

Site Manager: Florida Park Service (DEP)  
 Bob LaMont, Park Manager  
 1425 NE 58<sup>th</sup> Avenue, Ocala, Florida 34470  
 Phone: 352-236-7152, Fax: 352-236-7150  
 E-mail: [sl-river@atlantic.net](mailto:sl-river@atlantic.net)

Project ID: WR-025, WR-030

Project Size: 75 acres

Fiscal Year 01/02

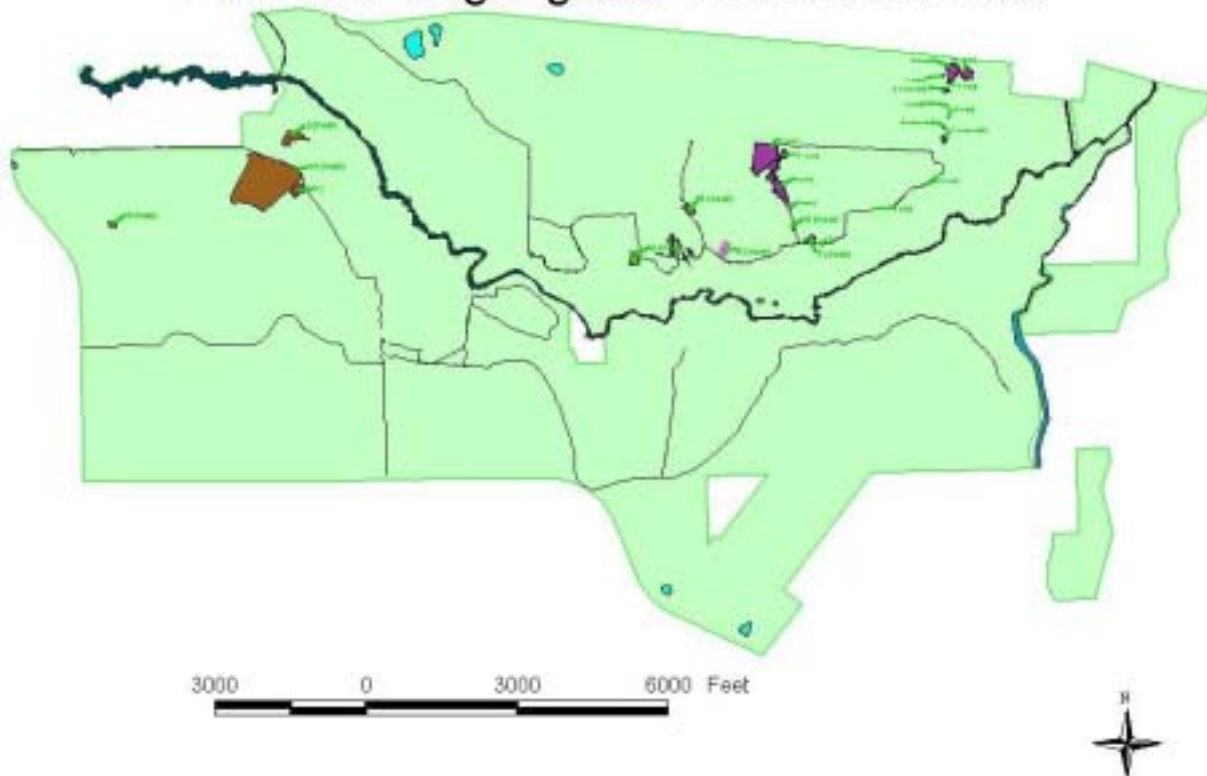
Project Cost: \$20,975

Silver River State Park is located in Ocala, adjoining the Silver Springs attraction. Silver River is a first magnitude spring-fed stream that flows into the Ocklawaha River. The park encompasses the river and over fourteen natural community types. Cogon grass occurs throughout the Pine Flatwoods and is invading the high quality, endangered Sandhill. Cogon grass occurs in various concentrations, from relatively continuous coverage to small patches, in areas accessible by roads. Portions of the flatwoods community do not presently have cogon grass, but the potential for cogon grass to spread into the unaffected flatwoods areas is extremely high. This project worked to contain the further spread of cogon grass into the park's flatwoods.

This was a cost-share project with the Florida Park Service contributing \$5,000 toward the project cost. A re-treatment was also conducted on the project area treated in the previous fiscal year.

Target Plants	Common Name	FLEPPC Rank	Treatment	Herbicide
<i>Imperata cylindrica</i>	cogon grass	Category I	foliar	Roundup

**SILVER RIVER STATE PARK  
 Marion County, Florida  
 Fall 2001 Cogongrass Treatment Areas**



**Rainbow Springs Phase II Invasive Exotic Plant Control**

County: Marion

PCL: Rainbow Springs State Park

PCL Size: 1,038 acres

Site Manager: Florida Park Service (DEP)

David Jowers, Park Manager

19158 SW 81<sup>st</sup> Place Road, Dunnellon, Florida 34432

Phone: 352-489-8503, Fax: 352-465-7855

E-mail: [david.jowers@dep.state.fl.us](mailto:david.jowers@dep.state.fl.us)

Project ID: WR-029

Project Size: 16.75 acres

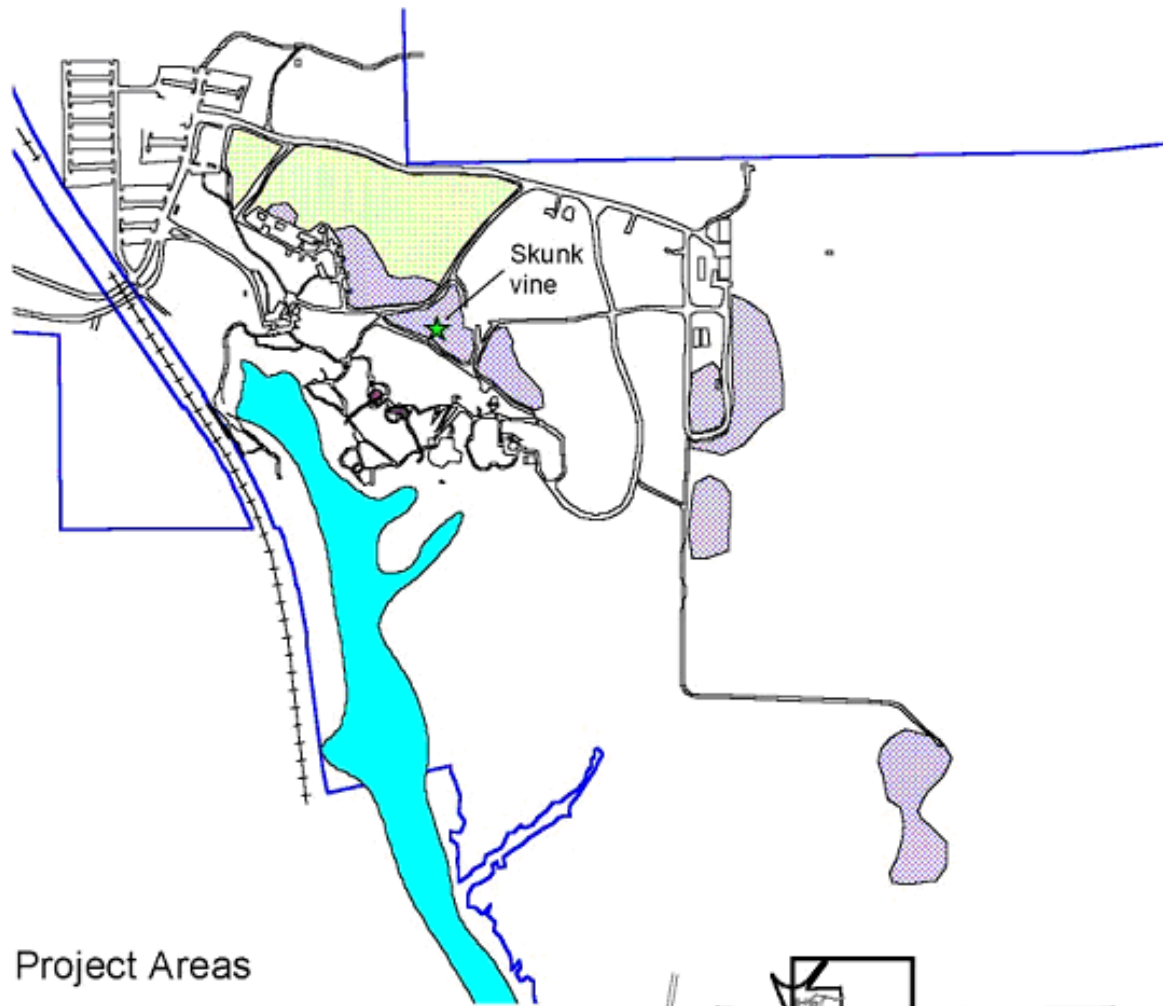
Fiscal Year 01/02

Project Cost: \$31,367.94



Rainbow Springs is a first-magnitude spring with an average discharge of 491 million gallons per day. The state park was established with the purchase of a former private attraction built around the spring pool and headsprings. The spring run is also managed by the state as the 4,000-acre Rainbow River State Aquatic Preserve. The former attraction included ornamental gardens, which went untended for nearly twenty years before the state's purchase and are the source of most of the exotic plant invasions. The natural communities of the park include Hydric Hammock, Pine Flatwoods, Sandhill, Upland Mixed Forest, and Basin Swamp. Disturbed areas, in addition to the gardens, include shallow phosphate mining pits from the late 1800s. The Rainbow Springs Phase II project was primarily directed at treatment of air potato.




This was a cost-share project with Florida Park Service contributing \$6,274 toward the project cost.

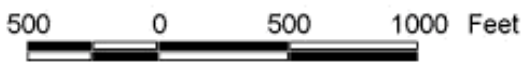
Target Plants	Common Name	FLEPPC Rank	Treatment	Herbicide
<i>Albizia julibrissin</i>	mimosa	Category I	basal	Garlon 4
<i>Cinnamomum camphora</i>	camphor-tree	Category I	basal	Garlon 4
<i>Melia azedarach</i>	Chinaberry	Category I	basal	Garlon 4
<i>Dioscorea bulbifera</i>	air-potato	Category I	basal	Garlon 4
<i>Dioscorea bulbifera</i>	air-potato	Category I	foliar	Roundup
<i>Colocasia esculenta</i>	wild taro	Category I	foliar	Roundup
<i>Paederia foetida</i>	skunk vine	Category I	foliar	Roundup
<i>Ardisia crenata</i>	coral ardisia	Category I	basal/foliar	Garlon 4
			hand pull	n/a
<i>Broussonetia papyrifera</i>	paper mulberry	Category II	basal	Garlon 4
<i>Wisteria sinensis</i>	Chinese wisteria	Category II	basal	Garlon 4
<i>Elaeagnus pungens</i>	silverthorn	Category II	basal	Garlon 4
<i>Podocarpus macrophyllus</i>	yew plumpine	n/a	basal	Garlon 4



**Project Areas**

-  Potato vine and woody exotics
-  Woody exotic plants

-  Rainbow River
-  Park boundary
-  Facilities



# Rainbow Springs State Park Phase II Project Areas

**Ravine Gardens Invasive Exotic Plant Control**

County: Putnam

PCL: Ravine Gardens State Park

PCL Size: 146.42 acres

Project Manager: Florida Park Service (DEP)  
 Bob Rundle, Park Manager  
 P.O. Box 1096, Palatka, Florida 32177  
 Phone: 904-329-3721, Fax: 904-329-3718  
 E-mail: [ravine@gbso.net](mailto:ravine@gbso.net)

Project ID: WR-017

Project Size: 6 acres

Fiscal Year 01/02

Project Cost: \$24,990.74

Ravine State Gardens contains three steephead ravines totaling approximately 53 acres. Air-potato was located primarily along the slopes of the ravine with an approximate 30% coverage. Camphor-tree and coral ardisia were scattered throughout the ravine with an estimated coverage of less than 5%. The bottom of the ravine downstream of the seeps had over one acre of bamboo (*Bambusa* spp.) removed within the last two years. In addition to the three Category I species listed above, cat's-claw vine (*Macfadyena unguis-cati*) invaded in small patches along the upper ravine slopes. Since no Current Control Technologies exist for this species, it was omitted from the proposal, but park staff proposed to remove this species from the area concurrently. The goal of the project was to control air-potato (*Dioscorea bulbifera*), camphor-tree (*Cinnamomum camphora*), and coral ardisia (*Ardisia crenata*) located within the western end of Ravine 1A.

This was a cost-share project with the Florida Park Service contributing \$5,000 toward the project cost.

Target Plants	Common Name	FLEPPC Rank	Treatment	Herbicide
<i>Dioscorea bulbifera</i>	air-potato	Category I	foliar	Rodeo
			hand pull	n/a
<i>Ardisia crenata</i>	coral ardisia	Category I	basal	Garlon 4
<i>Melia azedarach</i>	Chinaberry	Category I	basal	Garlon 4
<i>Cinnamomum camphora</i>	camphor-tree	Category I	basal	Garlon 4
<i>Elaeagnus pungens</i>	silverthorn	Category II	basal	Garlon 4
<i>Podocarpus macrophyllus</i>	yew plumpine	n/a	basal	Garlon 4

